

Sagnik Majumder

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EDUCATION

- AUGUST 2025 **University of Texas at Austin (UT)-Austin**, Texas, United States
Doctor of Philosophy and Master of Science in COMPUTER SCIENCE; GPA: 3.96/4.0
- JULY 2018 **Birla Institute of Technology and Science (BITS)-Pilani**, Pilani, Rajasthan, India
Bachelor of Engineering (Hons.) in ELECTRONICS AND INSTRUMENTATION
Thesis: “Neural Architecture Meta-learning via Reinforcement” | Advisor: [Prof. V. RAMESH](#)
GPA: 9.55/10, Distinction and ranked 2nd out of 100 students

INTERNSHIPS AND RESEARCH

- DEC 2022 - present | **Visiting researcher at Meta AI**
Manager - [Prof. Kristen Grauman](#)
- JAN 2020 - present | **Research assistant at UT Austin**
Advisor - [Prof. Kristen Grauman](#)
- JUNE 2022 - DEC 2022 | **Research scientist intern at Reality Labs Research, Meta**
Manager - [Dr. Vamsi Krishna Ithapu](#)
- JAN 2018 - MAY 2019 | **Research assistant at Goethe University**
Advisor - [Prof. Visvanathan Ramesh](#)
- MAY 2017 - May 2019 | **Research intern at Frankfurt Institute for Advanced Studies (FIAS)**
Advisor - [Prof. Christoph Malsburg](#)

PEER-REVIEWED PUBLICATIONS AND SUBMISSIONS

- **Sagnik Majumder**, Ziad Al-Halah, Kristen Grauman. “*Learning Spatial Features from Audio-Visual Correspondence in Egocentric Videos*”. Under review. [\[arXiv\]](#), [\[Project Page\]](#).
- **Sagnik Majumder**, Hao Jiang, Pierre Moulon, Ethan Henderson, Paul Calamia, Kristen Grauman*, Vamsi Krishna Ithapu*. “*Chat2Map: Efficient Scene Mapping from Multi-Ego Conversations*”. CVPR 2023. [\[arXiv\]](#), [\[Project Page\]](#).
- **Sagnik Majumder**, Changan Chen*, Ziad Al-Halah*, Kristen Grauman. “*Few-Shot Audio-Visual Learning of Environment Acoustics*”. NeurIPS 2022. [\[arXiv\]](#), [\[Project Page\]](#).
- **Sagnik Majumder**, Kristen Grauman. “*Active Audio-Visual Separation of Dynamic Sound Sources*”. ECCV 2022. [\[arXiv\]](#), [\[Project Page\]](#).
- **Sagnik Majumder**, Ziad Al-Halah, Kristen Grauman. “*Move2Hear: Active Audio-Visual Source Separation*”. ICCV 2021. [\[arXiv\]](#), [\[Project Page\]](#).
- Changan Chen, **Sagnik Majumder**, Ziad Al-Halah, Ruohan Gao, Santhosh K. Ramakrishnan, Kristen Grauman. “*Learning to Set Waypoints for Audio-Visual Navigation*”. ICLR 2021. [\[Publication\]](#), [\[Project Page\]](#).
- **Sagnik Majumder**, Chinmoy Samant, Greg Durrett. “*Model Agnostic Answer Reranking System for Adversarial Question Answering*”. EACL 2021 Student Research Workshop. [\[Publication\]](#).

- Martin Mundt, Iuliia Pliushch, **Sagnik Majumder**, Yong Won Hong, Visvanathan Ramesh. “Unified Probabilistic Deep Continual Learning through Generative Replay and Open Set Recognition”. *Journal of Imaging* 2022. [Preprint], [Codebase].
- Martin Mundt, **Sagnik Majumder**, Sreenivas Narasimha Murali, Panagiotis Panetsos, Visvanathan Ramesh. “Meta-learning Convolutional Neural Architectures for Multi-target Concrete Defect Classification with the CONcrete DEfect BRidge IMage Dataset”. *CVPR 2019*. [Publication], [Codebase].
- Martin Mundt, **Sagnik Majumder**, Tobias Weis, Visvanathan Ramesh. “Rethinking Layer-wise Feature Amounts in Convolutional Neural Network Architectures”. *NeurIPS 2018 CRACT Workshop*. [Publication], [Codebase].
- **Sagnik Majumder**, C. von der Malsburg, Aashish Richhariya, Surekha Bhanot, “Handwritten Digit Recognition by Elastic Matching”. *Journal of Computers* 2018. [Publication], [Codebase].

INVITED TALKS

Sight and Sound at CVPR 2023	Chat2Map: Efficient Scene Mapping from Multi-Ego Conversations
NSA Lab at JHU	Efficiently understanding 3D scenes using sight and sound
ECCV AV4D workshop 2022	Active Audio-Visual Separation of Dynamic Sound Sources
Sight and Sound at CVPR 2022	Active Audio-Visual Separation of Dynamic Sound Sources
Embodied AI seminar at Meta AI	Active Audio-Visual Separation of Dynamic Sound Sources

PROFESSIONAL SERVICE

Workshop co-organizer: CVPR Embodied AI workshop 2022-23
 Reviewer: CVPR; NeurIPS; ECCV; ICCV; RA-L; ICRA; BMVC; TNNLS

ACADEMIC HONORS AND ACHIEVEMENTS

JULY 2023	Received the Professional Development Award from UT Austin for presenting my research at CVPR 2023
NOVEMBER 2020	TOEFL iBT: 118 (READING: 29, LISTENING: 30 SPEAKING: 29, WRITING: 30)
JULY 2018	GRE: 334 (QUANTITATIVE: 170, VERBAL: 164, AWA: 5.0)
JAN 2016 - JUN 2018	Received merit scholarship for academic excellence from BITS Pilani for 5 consecutive semesters
MARCH 2017	Secured 2 nd place in paper presentation at APOGEE, BITS Pilani technical festival
DECEMBER 2016	Received DAAD WISE scholarship 2017 for research internship in Germany
JUNE 2014	Ranked in top 0.50% in IIT-JEE and 64 in WBJEE
FEBRUARY 2014	Offered KVPY fellowship by the Department of Science and Technology, Govt. of India

COURSEWORK

Graduate:	Deep Learning Seminar; Reinforcement Learning: Theory & Practice; Robot Learning; Natural Language Processing; Spoken Language Technologies; Math in Deep Learning; Statistical Models for Health and Behavioral Sciences; Algorithms: Techniques and Theory; Programming Languages;
Undergraduate:	Neural Networks & Fuzzy Logic; Machine Learning; Advanced Calculus; Linear Algebra and Complex Variables; Probability and Statistics; Computer Programming; Operating Systems; Object Oriented Programming; Advanced Computer Architecture; Algorithms and Complexity; Data Structures; Discrete Mathematics
MOOC:	Stanford's CS231n: Convolutional Neural Networks for Visual Recognition ; Stanford's CS224n: Natural Language Processing with Deep Learning ; UC Berkeley's CS294: Deep Reinforcement Learning

SOFTWARE SKILLS

Programming Language: Python; C; C++; Java; Matlab
Autodifferentiation Framework: PyTorch; Tensorflow; Caffe
Python Package: Numpy; Scipy; SK-learn; Matplotlib; Seaborn; Plotly
Operating System: Linux (Debian, Ubuntu); MS Windows
Distributed Version Control: Git
Document Preparation: \LaTeX ; MS Word

TEACHING EXPERIENCE

SEMESTER 1, 2017-18: Teaching assistant for "Neural Networks and Fuzzy Logic" at BITS Pilani

CO-CURRICULAR ACTIVITIES

2016-17: Project coordinator of Instrumentation Forum, BITS Pilani
2014-17: Member of BITS Firefox Community, Google Developers' Group and Instrumentation Forum at BITS Pilani

EXTRA-CURRICULAR ACTIVITIES

2016-17: Cultural secretary of Moruchhaya, the Bengali cultural association at BITS Pilani
2014-18: Member of Moruchhaya